OTHÆMATOMA.[1]

BY MATTHEW D. FIELD, M.D.

OTHÆMATOMA—hæmatoma auris (insane ear)—asylum ear. Under the term othæmatoma several distinct diseases have been described, and on this account much confusion has arisen.

Hæmatoma auris—perichondritis auriculæ—cystic formation and tumors of the external ear. It is well to first describe these diseases with the points of differential diagnosis.

Dr. Frederick Bird, of the Asylum of Sieburg, was the first to call attention to hæmatoma auris in the insane, in 1833. Since then many observers have reported cases occurring in the sane and insane. As observed in asylum cases, its advent is usually preceded by active congestion. "Both ears, or one of them, are hot, red and swollen; gradually the ear becomes hotter, redder—almost blue" (Bird). "Preceding the appearance of the tumor we find that one, or, in rare cases, both ears become red and swollen, while at the same time the face and eyes give evidence of a strong determination of blood toward the head; occasionally, however, the redness is absent, and the skin maintains its normal color, while the tumefaction appears due to a slight œdematous condition of the auricle.

"In the course of a period of time, ranging from a few hours to several days, an effusion of blood takes place and the malady attains its full development. The tumor occupies the auricle of the ear and projects from its concave surface. The tumor may remain for a longer or shorter time in *statu quo*, after which it may either undergo spontaneous rupture, or may be gradually absorbed. If rupture takes place, or if the tumor be punctured, there is a large escape of blood, mixed with sanguinolent serum, and by the introduction of a probe may satisfy ourselves of the existence of a very considerable cavity.

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"May terminate in an exudation of plastic lymph; uniting the wells of the cavity and causing its obliteration, leaving an indurated mass, which subsequently contracts and produces a strange and characteristic deformity" (Hun). There is little doubt but that these sanguinous tumors are composed of blood affused, not under the skin, but beneath the perichondrium, detached from the cartilage. The perichondrium thus detached contracts in proportion as the blood is reabsorbed, carrying with it in its retreat the other portions of the pavilion, which accounts for the deformity. The perichondrium admits upon its inner surface a newly-formed cartilage, which constitutes sometimes a layer united to its entire surface, sometimes independent islets more or less distinct from each other. These productions are the cause of the thickening of the ears which have been affected by sanguineous tumors (Foville). W. Phillemore Stiff divides the diseases into four stages: 1. Hyperæmia, and probably arteritis. 2. Effusion. 3. Cystic stage. 4. Permanent induration.

Upon section of the cartilage in an old case there was no appearance of a cyst; and under the microscope was observed to consist of hypertrophied cartilage and intercellular matter. In some parts the cartilage was converted into true bone containing Haversian canals (Toynabee). C. W. S. Cobbald found bone-cells and Haversian canals, but no arrangement, and concludes that the perichondrium is separated and secretes or develops new layers of cartilages.

Samuel Wilkes also states that in old cases bony deposits have been found. The perichondrium and subcutaneous tissues of the auricle often show a deposit of urate of soda in gouty people, and that this is worthy of notice, for it may be useful in diagnosis.

Probably the best description of perichondritis auriculæ is by Knapp, which is given here in his own words: "The majority of authors mention the inflammation of the perichondrium under the head of othæmatoma, with which, by Kramer and others, perichondritis auriculæ is used as a synonymous term. The description then unfolds the well-characterized picture of the hæmatoma auris. With this the idiopathic inflammation of the perichondrium of the ear should not be identified. I remember having seen only three cases of perichondritis auriculæ, of which only one showed the disease in all its phases. It was as follows: H. A., aged sixteen, had always enjoyed good health. Presented himself complaining of a moderately painful swelling in his right ear, which he had noticed a few days previously. His ears had never before given him any trouble, and he could not ascribe the present difficulty to any cause.

"The swelling was most pronounced on the anterior lower part, where also fluctuation was discovered. The case was entered as furancle of the external meatus, and the fluctuating part was opened, evacuating, however, not creamy, but watery pus. A week later the swelling in the canal had diminished, but the lower part of the concha was red, swollen, and indistinctly fluctuating. After three days the swelling in the concha had increased, showed distinct fluctuation, and was moderately painfnl on pressure. It was opened, and again watery pus escaped. Four days later the swelling filled the whole concha, was dark red, and had a doughy feel. I opened it above the lobule, which was unaffected, and let out as before a viscid fluid, with denser yellowish flakes. A probe, introduced through the opening, could be pushed more than half an inch upward. The cartilage felt hard and uneven; the perichondrium was detached from it, and could, together with the skin, be easily raised by the probe. The swelling crept slowly and steadily over the whole anterior surface of the auricle excepting the lobule. In some places it was diffuse, in others nodular and fluctuating. These places were always lanced, and the same thin viscid pus came out; as on the first opening, never any blood. In the fourth and fifth weeks the helix and posterior surface of the auricle were swollen, but did not fluctuate. At the beginning of the sixth week the swelling had attained its height. From the sixth week the swelling began to subside, first in the cartilaginous portion of the meatus, then in the concha, then on the posterior surface, which had been free from suppuration, and gradually all over the auricle.

"The whole misshapen auricle was pressed against the skull and measured scarcely two-thirds of its natural size. Only the lobule escaped the deformity. The whole inflammatory process lasted ten weeks."

Dr. Knapp adds: "I have seen a few cases of hæmatoma auris, but they were in the first stages, totally different from those under consideration. The swelling was markedly round and dark-blue, and on incision dark blood was evacuated. They ran a slow course, showing hemorrhagic swelling in the neighborhood of the first intumescence, which led to temporary sero-purulent discharge and permanent deformity of the auricle. The later stages were also evidently of an inflammatory nature. They occurred in sane people and were not attributed to any injury."

Dr. Pooley shortly afterward reported a case very similar to Dr. Knapp's. The patient was a married woman, aged twenty-one years; the disease was situated in the right ear and seemed to have followed a boil. There was no traumatism or other assignable cause. The course was slow, and deformity resulted.

The tumor was incised and a thin, glairy-looking fluid was evacuated. No blood escaped. Dr. Pooley concludes his report thus: "I think with Dr. Knapp that this disease ought to be considered as an independent affection, and not confounded with hæmatoma auris, whether idiopathic or traumatic. It seems, too, that inflammation of the perichondrium can be either idiopathic or traumatic, but that the former occurs the more frequently. It is not a difficult matter to make the differential diagnosis between hæmatoma and perichondritis."

Dr. Pomeroy publishes "a case of multiple abscess of the auricle resulting in partial destruction of the cartilage, developed from a middle and external otitis and somewhat resembling an othæmatoma." That was undoubtedly a case of perichondritis. The course of the disease was very slow, and when the swelling was opened, pus was found, but no blood. Dr. Pomeroy observes: "I am of the opinion that these abscess depend on a perichondritis." Permanent deformity resulted.

Dr. Buck "reports three cases of perichondritis auriculæ without injury. Two of his cases followed frost-bite. Dr. Roosa adds one case in his practice that followed abscess of the meatus and was due to extension of inflammation.

Kipp reports a case of "spurious othæmatoma from a burn." Both ears were affected, and the case was identical with the one reported by Dr. J. H. Smith, where both ears were the subjects of perichondritis, the result of a burn. Hartman once observed a case of perichondritis auriculæ after a burn. In looking over the literature of othæmatoma I have frequently seen these cases cited as cases of hæmatoma auris occurring among the sane. Hartman reported two cases of cyst formation in the auricle, and adds that this led him to examine the cases already reported, and says: "I made the surprising discovery that all these cases have been improperly (as I hope to show) described as hæmatoma. In both cases, accordingly, the tumor had developed slowly without manifesting any signs of inflammation. One had existed three weeks at the time of the incision, the other, fourteen days. In the first case the swelling reached its maximum in about eight days; in the second, there was a steady increase in size up to the time it was incised. In both the contents were a clear fluid, without any discoloration from blood or any admixture of flocci. As no trace of blood was seen, I became convinced that I had to deal not with an effusion of blood, a hæmatoma, but with a primary cyst formation." The characteristic point of differential diagnosis between othæmatoma and cyst is contrasted in the following table given by Hartman:

	OTHÆMATOMA.	CYST.
Age.	Appears at an advanced age.	At middle age.
Constitution.	Affects cachetic subjects and the insane.	Affects the robust and healthy.
Etiology.	Originates almost exclusively as the result of traumatism.	Conditions which favor it, not known.
Mode of development.	Tumor appears suddenly.	Growth gradual.
Symptoms.	Inflammation with pain.	No inflammation; no pain
Contents.	Blood.	Serum.
Mode of healing.	Deformity as a common result.	No deformity.

As for the relation between cyst and perichondritis of the auricle there is this difference, that inflammatory phenomena are altogether absent in the cases of the cysts, whilst perichondritis is accompanied with redness, heat, and severe pain. The contents of the swelling in perichondritis are frequently similar to those found in cysts. yet they generally have an unclear, purulent character from the admixture of pus corpuscles.

It is very apparent that both hæmatoma auris and perichondritis may cause resulting deformities that resemble each other if not identical. The causation may not always be apparent. It is also to be observed that the assigned cause is apt to vary very materially whether the writer be an alienist or an otologist. By the alienist it is generally believed that the frequent occurrence of this condition among the insane is due to trophic changes, and the experiments of Brown-Sequard and Claude Bernerde are cited as throwing light upon these cases. A few observers have held that though there might have been a predisposing or susceptibility existing, yet the most prominent cause was external violence. The larger number of cases reported seems to have occurred on the left side, and this fact has been urged by the believers in traumatic origin of the trouble to be due to the fact that a blow received from a right-handed person would be most likely to fall, for mechanical reasons, on the left side of his antagonist; while those holding the opposite view have accounted for this upon the ground that the left carotid artery is nearer the heart, and comes directly from the aorta, and therefore there is a more powerful circulation on the left side of the head than on the right.

Statistics seem to indicate that it occurs more frequently among males than females. Hun, who reports twenty-four cases from the records of the State Asylums at Utica, found twenty-three males and but one female.

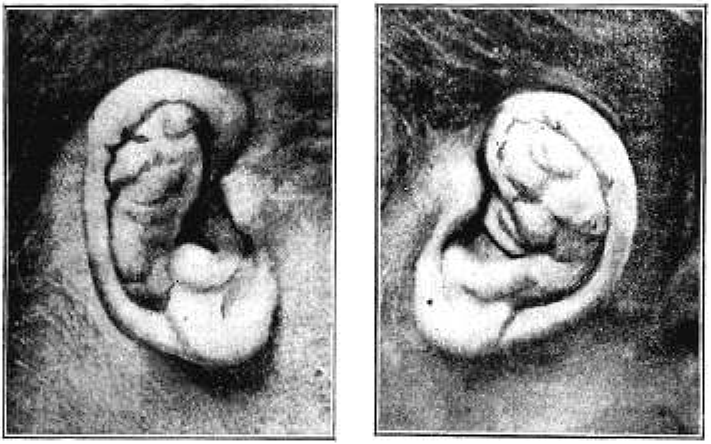
Dr. Dent, of the New York City Asylum for females, wrote me sometime since, that he had nineteen cases in the asylum, sixteen unilateral and three bilaterals; this was out of a total of 1672 female patients. Dr. Dent believes that hæmatoma occur more frequently among females than males, and places the ratio as five to three. This condition is generally looked upon as a grave complication when occurring in the insane. Hun remarks that it accompanies those forms of insanity that are essentially chronic or incurable, and consequently its presence indicates a very unfavorable prognosis.

W. Phillmore Stiff says, it must be concluded that the presence of hæmatoma adds to the gravity of the prognosis of the mental disorder. Foville writes: "All authors agree that, with few exceptional cases, they (hæmatoma) only appear in incurable cases, or at least signify the passing of their disease from the acute to the chronic stage;" though he afterwards remarked that although this specices of tumor is more frequently observed in the insane it is not exclusively confined to this class of patients.

Few cases of recovery among the insane are reported. Dr. Carlos MacDonald, in the JOURNAL OF NERVOUS AND MENTAL DISEASE, for February, 1887, reports one case with recovery of the mental condition, and he also quoted three others that had been previously recorded: one by Dr. Van Deusen, in this country; one by Dr. Teats, of

Coton Hill Institution; and one by Dr. Needham, of the Boothan Asylum.

Kiernan reported three cases of recovery; but Spitzka remarks, in his work, "It is significant that regarding the three recoveries which Kiernan observed among forty-eight patients with othæmatoma, that author in a copy of his paper sent the writer, two years subsequent to its publication, inserted marginal manuscript notes to the effect that all three patients subsequently returned to the asylum, one as a paretic dement, a second dying in an attack of raptus melancholicus, and the third as a (probably) periodical maniac."

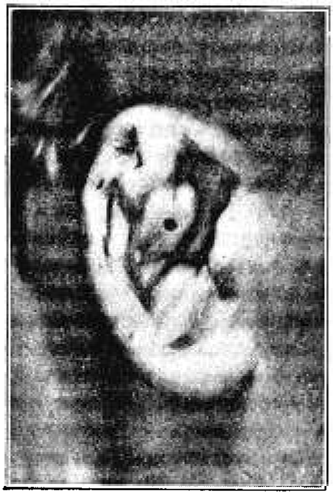


DOUBLE HÆMATOMA.

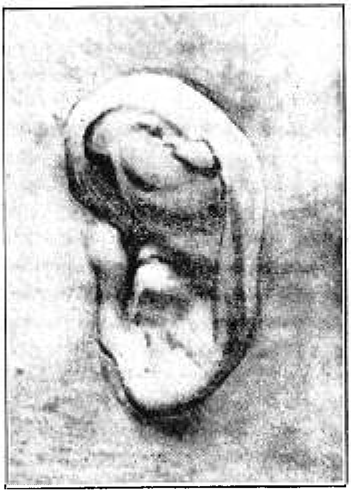
Professional Boxer, known as "Siddon's Mouse."

Notwithstanding the fact that many cases of hæmatoma auris of traumatic origin have been reported, we constantly see cases, reported even in these days, as rarities. A few years ago I exhibited five cases of deformed ears in the sane, before the New York Neurological Society. Since then I have seen several others. They were all in professional boxers. They informed me that it was very common, almost universal in "gentlemen of their profession." They also stated that, owing to certain municipal laws, "the profession" had largely migrated; otherwise they could easily have shown me a hundred cases; one of these had deformity of both ears. The boxers also informed me that similarly deformed ears were not infrequently met with among acrobats; the ones who were accustomed to be the under-men, and who received some companion who, after somersaulting, would land on their shoulders; in this way their ears had received injury, resulting in the characteristic deformity.

I have had eight photographs of these ears taken, and it is interesting to examine them with the group of eight taken from among the insane at the New York City Asylum. If the mounted photographs were to be shuffled together it would be impossible to separate them, so alike is the deformity in the two sets of cases. I have frequently seen the statement that statues of ancient boxers and athletes show this deformed ear, and that this deformity was looked upon in those days as an evidence of strength.

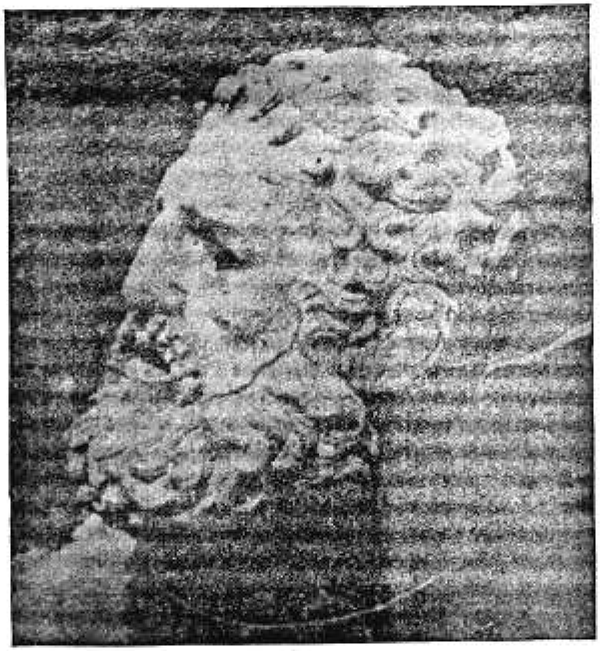


Professional Boxer, T. A.



Professional Boxer, Barres.

Roosa states that "Gudden, a German writer, quoted by Virchow, has shown that the auricles of ancient statues are very frequently ornamented by tumors resembling the vascular effusions seen among the insane. In the gallery at Munich the head of Hercules has such ears. These misshapen auricles are the typical marks of the ancient boxers or pugilists. Such fighters wrapped their hands in leather, and, thus armed, struck the ears of their antagonists; consequently in the figures of Hercules, Pollax, and other classical fighters, a deformed auricle is a regular appearance. Hector, for example, is represented as being othæmatomata." I wrote the late Prof. Joy, who was then at Munich, and an intimate friend of Gudden's son (an artist, and also residing at Munich), but he was unable to find the statues alluded to, or learn anything about them of value, though several photographs were sent me as of the probable or possible statues alluded to. I have discovered one statue that



"SITTING ATHLETE."

seems to show this deformity. It is of the Sitting Athlete, unearthed in Rome, in February, 1885, and supposed to have come from Greece. I have secured the original photograph from which the illustration in the "Century Magazine," of February, 1887, was taken, and had the photograph of the head enlarged, showing the left ear more distinctly, and the appearance certainly resembles the "insane ear." The description in the text of the article is as follows: "Every detail is absolutely realistic; the nose is swollen from the effects of the last blow received; the ears resemble a flat and shapeless piece of leather."

With the view of ascertaining the frequency with which this disease is met among the sane, I wrote several aural surgeons, asking for an expression of opinion on this point. Dr. G. O. Tansley wrote, "I have never met with one case of othæmatoma." Dr. J. B. Emerson replied to the same effect. Dr. Huntington Richards had seen several cases; two quite recently, and both of traumatic origin—one in a professional acrobat, and the other in a hotel porter, the result of the pressure of heavy trunks against the auricle. Dr. David Webster wrote: "I do not think Dr. Agnew and myself ever had a case of othæmatoma." Only a short time after this Dr. Webster sent me notes of a case that had come under his care, and was acquired while playing foot-ball. His description of the case was classical.

Examinations of the reports of ear affections treated at the Manhattan Eye and Ear Hospital, for the past eighteen years, show:

Total number of ear affections treated, - -	16,398
Total number of affections of auricle, - -	352
Number of cases of othæmatoma, - -	5
Number of cases of perichondritis, - -	4
Number of cases of tumors (nature not stated), -	20
Number of cases of malformation, - -	9

Examinations of the reports of ear affections treated at the New York Eye and Ear Infirmary for the past thirty years:

Total number of ear affections treated, -	58,476
Total number of affections of auricle treated,	1,346
Total number of othæmatoma, - - -	12
Total number of perichondritis, - - -	1
Total number of tumors (nature not stated), -	48
Total number of tumors (nature stated), -	10
Total number of deformity, - - - -	10

In six of the cases of othæmatoma (just half) the cause was stated to be traumatic; in the others the causation was not given.

My conclusions from these cited authorities, my own experience, investigation of cases and articles not quoted, are that we have two conditions, namely, hæmatoma auris and perichondritis auriculæ, that result in permanent deformity of the external ear very similar in appearance. That cases of cyst and tumor have often been confused with and reported as hæmatoma auris, but should be excluded as distinct conditions and of very different origin. That perichondritis while resembling hæmatoma in the resulting deformity differs in etiology, course and pathology.

That hæmatomia auris is nearly, if not always, precipitated by external violence applied to the auricle, though this violence may be only slight.

That hæmatoma auris is not a disease peculiar to the insane, but is found quite as frequently among the sane.

That hæmatoma auris, when occurring in the sane is usually found in those classes of individuals who are especially subject to continued traumatisms of the external ear, such as boxers, acrobats, porters, foot-ball players, and the like.

That it occurred in those who received continued and often-repeated blows on the external ear, of no great violence, rather than in those who received one violent injury to the ear.

That it appears that in the cases of hæmatoma in the sane, the continued irritation or traumatism received, give rise to changes and degeneration in the structure of the external ears that predisposes to hemorrhage, and that only an insignificant blow is sufficient to precipitate the disease.

That the changes and alterations in structure produced by continued irritation or traumatisms in the insane, act as predisposing causes in a similar manner in the sane.

I was unable to find among the sane a single case where the disease seemed to have arisen from a single severe blow; I could not find a single example in a prize fighter, but I found it in professional boxers, some of whom had been in prize fights. We should consider these predisposing causes of more importance than the single blow that precipitates the disease.

That so-called trophic changes and alterations in circulation play a very unimportant part in the causation of hæmatoma auris, either predisposing or exciting in the sane or insane.

That when hæmatoma auris appears among the insane, it occurs among the chronic, demented, and restless class, who by constant working at and rubbing of their ears with their hands, or by action of their head while in bed, or by many falls and conflicts with other patients, and sometimes with attendants, bring about the same changes as occur in boxers, acrobats, foot-ball players and the like. It is but a few days since that I saw double hæmatoma in a restless dement, who had never been in an asylum, and no history of injury could be obtained.

I am informed by sportsmen and others that blood tumors resulting in thickening and deformity are not infrequently observed in the ears of hunting dogs, those that chase the game through thick under-brush, injuring the external ear in this way. It is interesting to note that one of the cases that I had photographed at the asylum was a negro, with double hæmatoma; he was in the third stage of general paresis of the insane; he had been a professional boxer; the deformity in the left ear had occurred long before he became insane; that on the right side had developed in the asylum.

When we consider that hæmatoma auris occurs in the chronic and restless class of the insane, it is not strange that its appearance has been looked upon as an indication of incurability.

The indication of incurability of the mental condition is not necessarily to be explained on the theory that trophic changes have taken place. It is quite as reasonable to accept the fact that it occurs in cases where repeated, but not severe traumatisms have been received, and that this condition happens most frequently in the chronic and incurable insane. I think that nobody would attempt to advance the theory that trophic changes would account for the frequent appearance of hæmatoma auris among boxers, or that its appearance has any effect upon their mental condition.

It seems to me that the deformed ear so frequently met with among boxers, acrobats, and foot-ball players is the result of changes following a true hæmatoma, and is identical in etiology, course and pathology in the two classes of cases.

PARALYSIS AGITANS WITH TABES.

In "Mercredi médical," December 30, 1891, is an account of Placzek's patient afflicted with an unusual pathological combination, paralysis agitans and locomotor ataxia, a condition hitherto unnoted. The man, fifty-one years old, gave no adverse family history; reported syphilitic infection at twenty years of age, and stated that his present trouble began when about forty. At the onset there were lancinating pains in the extremities, loosening of the teeth that admitted of ready extraction with the fingers, and sexual impotence. Three years later tremor appeared in the legs, vibrations at the rate of three or four every second. Facial expression and bodily poise underwent marked change. The head was bent forward on the chest. Romberg's symptoms, Westphal's sign, immobility of the pupils, sharp pains, impotence, and vesical troubles, were all present, together with diminished cutaneous sensibility and normal muscular power, the classic attitude of paralysis agitans, and failure of memory. L. F. B.